

REMARKS

Applicants respectfully request reconsideration of the present application. No new matter has been added to the present application. Claims 1-6, 8-26, 28-46, and 48-60 have been rejected in the Office action. No claims have been amended, no new claims have been added, and no claims have been canceled in this Response. Accordingly, claims 1-6, 8-26, 28-46, and 48-60 are pending herein. Claims 1-6, 8-26, 28-46, and 48-60 are believed to be in condition for allowance and such favorable action is respectfully requested.

Rejections based on 35 U.S.C. § 103

A. Applicable Authority

The basic requirements of a *prima facie* case of obviousness are summarized in MPEP § 2143 through § 2143.03. In order “[t]o establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success [in combining the references]. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).” See MPEP § 2143. Further, in establishing a *prima facie* case of obviousness, the initial burden is placed on the Examiner. “To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in

light of the teachings of the references. *Ex parte Clapp*, 227 USPQ 972, 972, (Bd. Pat App. & Inter. 1985).” *Id.* See also MPEP § 706.02(j) and § 2142.

B. Rejections based on Aikins and Rapaport

Claims 1-6, 8-26, 28-46, and 48-60 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Aikins et al., PUFF: An Expert System for Interpretation of Pulmonary Data, (“the Aikins reference”) in view of U.S. Patent No. 5,926,526 to Rapaport et al. (“the Rapaport reference”). Applicants respectfully submit that a *prima facie* case of obviousness has not been established for claims 1-6, 8-26, 28-46, and 48-60 . In particular, the Aikins and Rapaport references, either alone or in combination, fail to teach or suggest all the claim limitations for each of claims 1-6, 8-26, 28-46, and 48-60. Additionally, there is no motivation or suggestion to combine or modify the Aikins and Rapaport references to achieve the claimed invention. Accordingly, Applicants respectfully traverse this rejection, as hereinafter set forth.

Referring initially to independent claim 1, a method in a computer system for translating medical test results into plain language is recited. The method includes receiving a medical test result for a type of medical test and determining if the medical test result will be automatically interpreted independent of clinician input or if the medical test result will be interpreted using clinician input. If the medical test result will be automatically interpreted independent of clinician input, at least one template associated with the type of medical test is identified. A template matching the medical test result is selected, and a plain language explanation based on the selected template is outputted.

In contrast to the invention of claim 1, the Aikins reference discusses an expert system (“PUFF”) that may interpret measurements from respiratory tests administered to patients in a pulmonary (lung) function laboratory. See *Aikins*, section 2 Task, paragraph 1. By

interpreting pulmonary function test results, the PUFF expert system may provide a diagnosis for the patients. *See id.*, section 3 Rationale, paragraph 1. The PUFF expert system is intended to assist pulmonary physiologists. *See id.*, section 6 Observations, paragraph 1. In particular, pulmonary physiologists may review reports from the PUFF expert system, revise the reports if necessary, and enter the reports into patient records. *See id.*, section 4 Project History and Status, paragraph 4; section 6 Observations, paragraph 1.

Applicants respectfully submit that the Aikins reference fails to teach or suggest all the limitations of claim 1. First, the Aikins reference fails to teach or suggest “determining if the medical test result will be automatically interpreted independent of clinician input or if the medical test result will be interpreted using clinician input.” On page 3, the Office action admits that the Aikins reference fails to explicitly teach this limitation. However, page 3 and 4 of the Office action alleges that this limitation would have been obvious in view of a portion of the Aikins reference indicating that staff “would be necessary . . . to handle unexpected cases, and to correct interpretations that they felt were inaccurate.” Applicants respectfully disagree with this conclusion. In particular, the cited portion of the Aikins reference merely reflects that the PUFF system may be unable to handle unexpected cases and that the staff would be required to interpret those cases. This does not indicate that the system itself would make a determination if the system will automatically interpret the medical test result independent of clinician input or if the medical test result will be interpreted using clinician input. It is illogical to conclude that a system can make such a determination when a case is “unexpected.”

Moreover, the Office action does not include any evidence why someone of ordinary skill in the art would have modified the Aikins reference to achieve this limitation. The mere fact that a reference can be modified does not render the resultant modification obvious

unless the prior art also suggests the desirability of the modification. MPEP § 2143.01. Specifically, there must be a suggestion or motivation in the references to make the modification. *Id.* The Office action's sole rationale for such a modification is that "[i]t would have been obvious to one of ordinary skill in the art at the time of the invention that a determination within the system would be used to determine if the case is simple and able to be handled by the system without help from the staff, or is a complex case and needs to be handled by the staff" See Office action, p. 3-4. The Office action cannot rely on the modification without first supporting the motivation to make the modification. Such motivation does not appear anywhere in the reference, and the Office action has not presented any actual evidence in support of the same. Instead, the Office action relies on broad conclusory statements and unknown authority. Such a basis does not adequately support the modification of the Aikins reference.

Applicants also respectfully submit that the Aikins reference fails to teach or suggest "identifying at least one template associated with the type of medical test" as recited in claim 1. The claimed invention includes templates for a variety of different types of medical tests. When a medical test result is received, the appropriate template(s) that correspond with that type of medical test result are identified from all available templates. In contrast, the Aikins reference does not indicate that its diagnosis includes any templates (as admitted on page 4 of the Office action). Moreover, the PUFF system in the Aikins reference is concerned with only one type of medical test – pulmonary function. Accordingly, even if it were modified to include templates for pulmonary function, no identification of templates that match the type of medical test result would be needed because all templates would be for that single type of medical test.

Next, Applicants respectfully submit that the Aikins reference fails to teach or suggest "selecting a template matching the medial test result." As noted above, the Aikins

reference fails to teach or suggest that the PUFF system's diagnosis includes any templates. Accordingly, this limitation is necessarily missing from the Aikins reference. Following from this deficiency, the Aikins reference also fails to teach or suggest "outputting a plain language explanation based on the selected template." Moreover, Applicants note that the present invention is concerned with providing a plain language explanation that is understandable by a patient. In contrast, the diagnosis from the PUFF system in the Aikins reference is specifically intended for physicians. Accordingly, the Aikins reference fails to teach or suggest providing a plain language explanation as recited in independent claim 1.

The Rapaport reference was cited in the Office action in an attempt to show that some differences between the invention of claim 1 and the Aikins reference are obvious differences. In particular, the Rapaport reference was cited in the Office action to cure the deficiency that the Aikins reference does not teach or suggest that the PUFF system's diagnosis includes a template. *See* Office action, p. 4. However, Applicants respectfully submit that there is no suggestion or motivation to combine the Rapaport and Aikins references. MPEP § 706.02(j) states that in order to establish a prima facie case of obviousness under § 103:

there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. ... The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on the applicant's disclosure.

MPEP § 2142 states that "[w]hen the motivation to combine the teachings of the references is not immediately apparent, it is the duty of the examiner to explain why the combination of the teachings is proper." The examiner is required to present actual evidence and make particular findings related to the motivation to combine the teachings of the references.

See *in re Kotzab*, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000); *In re Dembiczak*, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999). Broad conclusory statements regarding the teaching of multiple references, standing alone, are not “evidence.” *Dembiczak*, 50 USPQ2d at 1617. “The factual inquiry whether to combine the references must be thorough and searching.” *In re Lee*, 61 USPQ2d 1430, 1433 (Fed. Cir. 2002) (citing *McGinley v. Franklin Sports, Inc.*, 60 USPQ2d 1001, 1008 (Fed. Cir. 2001)). The factual inquiry must be based on objective evidence of record, and cannot be based on subjective belief and unknown authority. *Id.* at 1433-34. The examiner must explain the reasons that one of ordinary skill in the art would have been motivated to select the references and to combine them to render the claimed invention obvious. See *in re Rouffet*, 47 USPQ2d 1453, 1459 (Fed. Cir. 1998).

The Office action does not present any evidence why someone of ordinary skill in the art would have combined the Rapaport and Aikins references. The sole explanation in the Office action to combine the Rapaport and Aikins references is that “[i]t would have been obvious to one of ordinary skill in the art at the time of the invention to combine the automatic diagnosis features of Aikins et al. with the templates of Rapaport et al. to supply the patient with specific medical test results, that the patient is able to understand in a secure environment without having the medical provider to continually attempt to contact the patient, saving both time and resources of the medical provider and patient as taught by Rapaport et al.” Office action, p. 4. Instead of showing objective evidence of a proper motivation or suggestion, the Office action has cited simply the benefits of features that are present in the Rapaport reference but are missing in the Aikins reference as the motivation. By extracting the relevant parts from each of the two references and combining those parts, the Office action has effectively recreated the invention by using the claim as a blueprint. Neither the Aikins reference nor the Rapaport

reference discloses or suggests a motivation to combine with the other to achieve the claimed invention. The references themselves do not suggest the viability of making the combination, and someone of ordinary skill in the art would not think to combine them. Thus, the references are not properly combined. Therefore, the combination is improper and must be withdrawn.

Further, even if the references were combined, the combination would still fail to teach or suggest multiple limitations of independent claim 1. As note above, the Aikins reference fails to teach or suggest multiple limitations of the claim 1. The Rapaport reference, which discusses a system for communicating manual interpretations of results to patients, fails to cure these deficiencies. More importantly, the Rapaport reference fails to cure the deficiency in the Aikins reference for which it was cited by the Office action. In particular, the Rapaport reference was cited by the Office action because the Aikins reference fails to teach or suggest that the PUFF system's diagnosis includes templates. Even if the system in the Aikins reference was modified to include templates, the limitation "identifying at least one template associated with the type of medical test" would not be taught or suggested. As noted above, the PUFF system in the Aikins reference is concerned with only one type of medical test – pulmonary function. Accordingly, a modification of the Aikins to include templates for pulmonary function would not require an identification of templates that match the type of medical test result because all templates would be for that single type of medical test.

In view of the above, it is respectfully submitted that the Aikins and Rapaport references, either alone or in combination, fail to teach or suggest all the limitations of independent claim 1. As such, independent claim 1 is patentable over the Aikins and Rapaport references, and Applicants respectfully request withdrawal of the 35 U.S.C. § 103(a) rejection of independent claim. 1.

Each of independent claims 21 and 41 include limitations similar to those recited in independent claim 1. As such, it is respectfully submitted that the Aikins and Rapaport reference, either alone or in combination, fail to teach or suggest all the claim limitations of independent claims 21 and 41 for at least the same reasons as noted above for independent claim 1. Independent claims 21 and 41 are patentable over the Aikins and Rapaport references, and Applicants respectfully request withdrawal of the 35 U.S.C. § 103(a) rejection of independent claims 21 and 41.

Claims 2-6 and 8-20 depend from independent claim 1; claims 22-26 and 28-40 depend from independent claim 21; and claims 42-46 and 48-60 depend from independent claim 41. Accordingly, these claims are believed to be in condition for allowance for at least the above-cited reasons. As such, Applicants respectfully request withdrawal of the 35 U.S.C. § 103(a) rejections of claims 2-6, 8-20, 22-26, 28-40, 42-46, and 48-60 as well. Dependent claims 2-6, 8-20, 22-26, 28-40, 42-46, and 48-60 are believed to be in condition for allowance and such favorable action is respectfully requested.

Furthermore, many of the dependent claims are separately patentable because they contain additional limitations not found in either the Aikins or Rapaport references. For example, in claims 8, 28, and 48, if it is determined that the medical test result will be interpreted using clinician input, the medical test result is distributed to the clinician who provides input matching the medical test result to a template. As indicated previously, the Aikins reference merely indicates that the PUFF system may not be able to interpret unexpected cases. However, the reference does not indicate or even suggest that the system may: (1) determine that a medical test result is to be interpreted using clinician input; (2) distribute the medical test result to a clinician; and (3) receive clinician input matching the medical test result to a template.

Accordingly, the Aikins and Rapaport references, either alone or in combination, fail to teach or suggest the limitations of claims 8, 28, and 48 in the context of their respective base claims 1, 21, and 41.

CONCLUSION

For at least the reasons stated above, claims 1-6, 8-26, 28-46, and 48-60 are now in condition for allowance. Applicants respectfully request withdrawal of the pending rejections and allowance of claims 1-6, 8-26, 28-46, and 48-60. If any issues remain that would prevent issuance of this application, the Examiner is urged to contact the undersigned by telephone prior to issuing a subsequent action. It is believed that no fee is due in conjunction with the present amendment. However, if this belief is in error, the Commissioner is hereby authorized to charge any amount required to Deposit Account No. 19-2112.

Respectfully submitted,

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